ABSTRACT OF THE DISCLOSURE

The toughened material is a diamond material of a substantially continuous matrix and a material with a degree of ductility that is greater than that of granules dispersed within the continuous matrix; wherein the toughened material is formed by placing a diamond material into a chamber of a thermal control apparatus; introducing a cryogenic material into the thermal control apparatus; decreasing the material temperature in the chamber with the cryogenic material while preventing over-stressing of the diamond material to a first target temperature ranging from -40 degrees F to -380 degrees F at a first temperature rate; stopping the introduction of the cryogenic material into the chamber once the first target temperature is reached; increasing the material temperature to the second target temperature ranging from 0 degrees F to 1400 degrees F at a second temperature rate resulting in a toughened diamond material.